STIC Search Report
EIC 2100

STIC Database Tracking Number 154364

TO:	From:
Nadia Khoshnoodi **Location: RND 2B65** **Art Unit : 2133** **Wednesday, May 25, 2005** **Case Serial Number: 09/728292**	**David Holloway** **Location: EIC 2100** **RND 4B19** **Phone: 2-3528** **david.holloway@uspto.gov**

Search Notes

Dear Examiner Khoshnoodi,

Attached please find your search results for above-referenced case.
Please contact me if you have any questions or would like a re-focused search.

David

STIC EIC 2100 154364
Search Request Form

Today's Date: 5-25-2005

What date would you like to use to limit the search?
Priority Date: 5/25/2000 Other:

Name Nadia Khoshnoodi
AU 2133 Examiner # 80432
Room # 2B65 Phone 2-3825
Serial # 09/728,292

Format for Search Results (Circle One):
PAPER DISK EMAIL
Where have you searched so far?
USP DWPI EPO JPO ACM IBM TDB
IEEE INSPEC SPI Other

Is this a "Fast & Focused" Search Request? (Circle One) YES NO
A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at http://ptoweb/patents/stic/stic-tc2100.htm.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

Bar coding method:
modulating a base image, the base image being a handwritten signature.
→where "modulating" = vectorizing the handwritten signature
also when modulating the base image, doing so with a graphical encoding of the signed message

(Basically something like a handwritten-signature embedded in a bar code
↳although it's geared towards bar codes, something like water-marking may also work.

→claim 7 5,490,217

STIC Searcher David Holloway Phone 2-3528
Date picked up 5-25-05 Date Completed 5-25-05

```
Set     Items   Description
S1      18548   BARCOD? OR (PRODUCT? OR BAR)()(CODING OR CODE?) OR ISBN OR
             UPC OR UNIVERSAL()PRODUCT()CODE? OR EAN OR POSTNET OR CODABAR
             OR CODE128 OR CODE()128
S2      31538   HANDWRIT? OR HAND()(WRITTEN OR WRITING) OR AUTOGRAPH? OR C-
             URSIV? OR LONGHAND?
S3        311   S2(2N)(VECTOR? OR MODULAT? OR ENCRYPT? OR ENCIPHER? OR ENC-
             YPHER? OR STEGANOGRAPH? OR WATERMARK?)
S4          0   S1 AND S3
S5         74   S1 AND S2
S6         12   S5 AND (VECTOR? OR MODULAT? OR ENCRYPT? OR ENCOD? OR ENCYP-
             HER? OR ENCIPHER? OR STEGANOGRAPH? OR WATERMARK?)
S7         10   S1(2N)S2
S8         19   S6 OR S7
S9         23   S5 AND (COMBIN? OR MERG? OR EMBED? OR INTEGRAT? OR INCORPO-
             RAT? OR WATERMARK? OR STEGANOGRAPH?)
S10        33   S8 OR S9
S11        21   RD (unique items)
S12        13   S11 NOT PY>2000
File   8:Ei Compendex(R) 1970-2005/May W3
         (c) 2005 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2005/May
         (c) 2005 ProQuest Info&Learning
File  65:Inside Conferences 1993-2005/May W4
         (c) 2005 BLDSC all rts. reserv.
File   2:INSPEC 1969-2005/May W3
         (c) 2005 Institution of Electrical Engineers
File  94:JICST-EPlus 1985-2005/Apr W1
         (c)2005 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2005/May 23
         (c) 2005 The Gale Group
File   6:NTIS 1964-2005/May W3
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
File 144:Pascal 1973-2005/May W3
         (c) 2005 INIST/CNRS
File  34:SciSearch(R) Cited Ref Sci 1990-2005/May W4
         (c) 2005 Inst for Sci Info
File  99:Wilson Appl. Sci & Tech Abs 1983-2005/Apr
         (c) 2005 The HW Wilson Co.
File  95:TEME-Technology & Management 1989-2005/Apr W3
         (c) 2005 FIZ TECHNIK
```

12/5/3 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04852930 E.I. No: EIP97103884181
Title: Integration **of** hand **-** written **address interpretation technology into the United States Postal Service Remote Computer Reader System**
Author: Srihari, Sargur N.; Kuebert, Edward J.
Corporate Source: State Univ of New York at Buffalo, Amherst, NY, USA
Conference Title: Proceedings of the 1997 4th International Conference on Document Analysis and Recognition, ICDAR. Part 2 (of 2)
Conference Location: Ulm, Ger Conference Date: 19970818-19970820
Sponsor: IEEE
E.I. Conference No.: 47157
Source: Proceedings of the International Conference on Document Analysis and Recognition, ICDAR v 2 1997. IEEE, Los Alamitos, CA, USA,97TB100138. p 892-896
Publication Year: 1997
CODEN: 002693
Language: English
Document Type: CA; (Conference Article) Treatment: T; (Theoretical)
Journal Announcement: 9712W2
Abstract: **Hand - written** address interpretation (HWAI) technology has been recently **incorporated** into the processing of letter mail by the United States Postal Service. The Remote **Bar Coding** System, which is an image management system for assigning **bar codes** to mail that is not fully processed by postal OCRs, have been retrofit with the Remote Computer Reader (RCR) into which the HWAI technology is **integrated** . A description of the HWAI technology, including its algorithms for the control structure, recognizers and databases is provided. Performance on more than a million **hand - written** mail-pieces in a field deployment of the **integrated** RCR-HWAI system are indicated. Future enhancements for a nationwide deployment of the system are indicated. (Author abstract) 5 Refs.
Descriptors: *Optical character recognition; Database systems; Image processing; Data structures; Error detection; Error analysis; Algorithms
Identifiers: **Handwritten** address interpretation
Classification Codes:
741.1 (Light/Optics); 723.3 (Database Systems); 723.2 (Data Processing); 721.1 (Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory); 921.6 (Numerical Methods)
741 (Optics & Optical Devices); 723 (Computer Software); 721 (Computer Circuits & Logic Elements); 921 (Applied Mathematics)
74 (OPTICAL TECHNOLOGY); 72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

12/5/5 (Item 5 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04108968 E.I. No: EIP95032620456
Title: Extended-shadow-code based approach for off-line signature verification: Part - I - evaluation of the bar mask definition
Author: Sabourin, Robert; Genest, Ginette
Corporate Source: Lab d'Imagerie et de Modelisation Tridimensionnelle, Montreal, Que, Can
Conference Title: Proceedings of the 12th IAPR International Conference on Pattern Recognition. Part 2 (of 3)
Conference Location: Jerusalem, Isr Conference Date: 19941009-19941013
Sponsor: IAPR; IEEE; The Information Processing Association of Israel
E.I. Conference No.: 42601
Source: Proceedings - International Conference on Pattern Recognition v 2 1994. IEEE, Piscataway, NJ, USA,94CH3440-5. p 450-453
Publication Year: 1994
CODEN: PICREG ISSN: 1051-4651
Language: English
Document Type: CA; (Conference Article) Treatment: T; (Theoretical)
Journal Announcement: 9505W2
Abstract: In this paper, the authors present an evaluation of the extended shadow code (ESC) used as a global feature **vector** for the signature verification problem. The proposed class of shape factors seems to be a good compromise between global features related to the general aspect of the signature, and local features related to measurements taken on specific parts of the signature. This is achieved by the bar mask definition, where at low resolution the ESC is related to the overall proportions of the signature. At high resolution, values of the horizontal, vertical and diagonal bars could be related to local measurements taken on specific parts of the signature without requiring low-level **handwriting** segmentation which is a very difficult task. (Author abstract) 7 Refs.
Descriptors: *Character recognition; Feature extraction; Image analysis; Image segmentation; **Bar codes** ; **Vectors**
Identifiers: Extended shadow code; Off line signature verification; Bar mask
Classification Codes:
723.2 (Data Processing); 723.5 (Computer Applications); 921.1 (Algebra)
723 (Computer Software); 921 (Applied Mathematics)
72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

12/5/11 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04149988 JICST ACCESSION NUMBER: 99A0590911 FILE SEGMENT: JICST-E
Paper Interface by Programs Embedded **in Paper.**
YAMASHITA DAISUKE (1); HAGIYA MASAMI (1); TAKAGI HIRONOBU (2)
(1) Univ. of Tokyo, Grad. Sch.; (2) IBM Japan, Ltd.
Joho Shori Gakkai Kenkyu Hokoku, 1999, VOL.99,NO.35(HI-83), PAGE.25-30, FIG.4, REF.10
JOURNAL NUMBER: Z0031BAO ISSN NO: 0919-6072
UNIVERSAL DECIMAL CLASSIFICATION: 681.3:165 681.51:007.51 681.327.2
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: For realizing more "intelligent" paper by helping paper work with computer, we proposed the realization that programs for processing the information on paper and outputing the result on paper are **encoded** to QR(Quick Response) code which is a kind of two-dimensional **barcode** , and are **embedded** in the paper itself. With this, a user can continue the paper work only with paper. Such paper can be copied and distributed numerously, and can be applied to the same way of managing and using normal paper. Moreover, for using such paper without depending on the environment of computer, we provide the API(Application Program Interface) for describing programs **embedded** in paper. In this paper, we build the API on Java. (author abst.)
DESCRIPTORS: **handwritten** character recognition; human interface; input output unit; **bar code** ; laser scanner; packaging design; paper; prototyping(computer
BROADER DESCRIPTORS: character recognition; figure pattern recognition; pattern recognition; recognition; interface; computer peripheral equipment; equipment; optical instrument; scanner; design; computer system development; development
CLASSIFICATION CODE(S): JE07000S; IB03000G; JC04050U

```
Set     Items   Description
S1     690894   BARCOD? OR (PRODUCT? OR BAR)()(CODING OR CODE?) OR ISBN OR
           UPC OR UNIVERSAL()PRODUCT()CODE? OR EAN OR POSTNET OR CODABAR
           OR CODE128 OR CODE()128
S2     163160   HANDWRIT? OR HAND()(WRITTEN OR WRITING) OR AUTOGRAPH? OR C-
           URSIV? OR LONGHAND?
S3         34   S2(2N)(VECTOR? OR MODULAT? OR ENCRYPT? OR ENCIPHER? OR ENC-
           YPHER? OR STEGANOGRAPH? OR WATERMARK?)
S4          0   S1 (10N) S3
S5        593   S1(10N)S2
S6         45   S5 (10N) (COMBIN? OR MERG? OR EMBED? OR INTEGRAT? OR INCOR-
           PORAT? OR WATERMARK? OR STEGANOGRAPH?)
S7         79   S3 OR S6
S8         48   RD (unique items)
S9         27   S8 NOT PY=2000:2005
S10        27   S9 NOT PD=20000525:20030525
S11        27   S10 NOT PD=20030525:20050601
File 275:Gale Group Computer DB(TM) 1983-2005/May 25
         (c) 2005 The Gale Group
File  47:Gale Group Magazine DB(TM) 1959-2005/May 25
         (c) 2005 The Gale group
File  75:TGG Management Contents(R) 86-2005/May W3
         (c) 2005 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2005/May 25
         (c) 2005 The Gale Group
File  16:Gale Group PROMT(R) 1990-2005/May 24
         (c) 2005 The Gale Group
File 624:McGraw-Hill Publications 1985-2005/May 25
         (c) 2005 McGraw-Hill Co. Inc
File 484:Periodical Abs Plustext 1986-2005/May W4
         (c) 2005 ProQuest
File 613:PR Newswire 1999-2005/May 25
         (c) 2005 PR Newswire Association Inc
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 141:Readers Guide 1983-2005/Dec
         (c) 2005 The HW Wilson Co
File 239:Mathsci 1940-2005/Jun
         (c) 2005 American Mathematical Society
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
File 696:DIALOG Telecom. Newsletters 1995-2005/May 24
         (c) 2005 The Dialog Corp.
File 553:Wilson Bus. Abs. FullText 1982-2004/Dec
         (c) 2005 The HW Wilson Co
File 621:Gale Group New Prod.Annou.(R) 1985-2005/May 25
         (c) 2005 The Gale Group
File 674:Computer News Fulltext 1989-2005/May W3
         (c) 2005 IDG Communications
File  88:Gale Group Business A.R.T.S. 1976-2005/May 24
         (c) 2005 The Gale Group
File 369:New Scientist 1994-2005/Apr W2
         (c) 2005 Reed Business Information Ltd.
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 635:Business Dateline(R) 1985-2005/May 25
         (c) 2005 ProQuest Info&Learning
File  15:ABI/Inform(R) 1971-2005/May 25
         (c) 2005 ProQuest Info&Learning
File   9:Business & Industry(R) Jul/1994-2005/May 24
         (c) 2005  The Gale Group
File  13:BAMP 2005/May W3
         (c) 2005  The Gale Group
File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
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File 610:Business Wire 1999-2005/May 25
(c) 2005 Business Wire.
File 647:CMP Computer Fulltext 1988-2005/May W1
(c) 2005 CMP Media, LLC
File 98:General Sci Abs/Full-Text 1984-2004/Dec
(c) 2005 The HW Wilson Co.
File 148:Gale Group Trade & Industry DB 1976-2005/May 25
(c)2005 The Gale Group
File 634:San Jose Mercury Jun 1985-2005/May 24
(c) 2005 San Jose Mercury News
File 80:TGG Aerospace/Def.Mkts(R) 1982-2005/May 25
(c) 2005 The Gale Group
File 587:Jane`s Defense&Aerospace 2005/May W4
(c) 2005 Jane`s Information Group
File 264:DIALOG Defense Newsletters 1989-2005/May 23
(c) 2005 The Dialog Corp.
File 248:PIRA 1975-2005/May W2
(c) 2005 Pira International

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Set     Items   Description
S1      37237   BARCOD? OR (PRODUCT? OR BAR)()(CODING OR CODE?) OR ISBN OR
             UPC OR UNIVERSAL()PRODUCT()CODE? OR EAN OR POSTNET OR CODABAR
             OR CODE128 OR CODE()128
S2      11104   HANDWRIT? OR HAND()(WRITTEN OR WRITING) OR AUTOGRAPH? OR C-
             URSIV? OR LONGHAND?
S3        131   S2(2N)(VECTOR? OR MODULAT? OR ENCRYPT? OR ENCIPHER? OR ENC-
             YPHER? OR STEGANOGRAPH? OR WATERMARK?)
S4         24   S1 AND S3
S5          0   S1(10N)S3
S6     206571   IC=(G06F OR H04L OR G09C OR H04K)
S7          2   S4 AND S6
S8         27   S1(2N)S2
S9         10   S6 AND S8
S10        12   S7 OR S9
S11        12   IDPAT (sorted in duplicate/non-duplicate order)
S12        12   IDPAT (primary/non-duplicate records only)
File 348:EUROPEAN PATENTS 1978-2005/May W03
         (c) 2005 European Patent Office
File 349:PCT FULLTEXT 1979-2005/UB=20050519,UT=20050512
         (c) 2005 WIPO/Univentio
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Set     Items   Description
S1      31999   BARCOD? OR (PRODUCT? OR BAR)()(CODING OR CODE?) OR ISBN OR
             UPC OR UNIVERSAL()PRODUCT()CODE? OR EAN OR POSTNET OR CODABAR
             OR CODE128 OR CODE()128
S2      11373   HANDWRIT? OR HAND()(WRITTEN OR WRITING) OR AUTOGRAPH? OR C-
             URSIV? OR LONGHAND?
S3         33   S2(2N)(VECTOR? OR MODULAT? OR ENCRYPT? OR ENCIPHER? OR ENC-
             YPHER? OR STEGANOGRAPH? OR WATERMARK?)
S4          0   S1 AND S3
S5        110   S1 AND S2
S6          6   S5 AND (VECTOR? OR MODULAT? OR ENCRYPT? OR ENCOD? OR ENCYP-
             HER? OR ENCIPHER? OR STEGANOGRAPH? OR WATERMARK?)
S7         11   S1(2N)S2
S8         16   S6 OR S7
S9          1   S5 AND IC=H04L-009
S10        49   S5 AND IC=(H04L-009? OR G06F)
S11         1   S5 AND IC=(H04L-009 OR G09C OR H04K)
S12        19   S5 AND (EMBED? OR HIDE? OR HIDDEN OR HIDING OR INCORPORAT?
             OR INTEGRAT? OR COMBIN? OR MERG?)
S13        71   S8 OR S9 OR S10 OR S11 OR S12
S14        49   S13 AND IC=(G06F OR H04L OR H04K OR G09C)
S15        25   S14 NOT AD=20000525:20030525
S16        23   S15 NOT AD=20030525:20050601
S17        23   IDPAT (sorted in duplicate/non-duplicate order)
S18        21   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Nov 1976-2005/Jan(Updated 050506)
         (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200533
         (c) 2005  Thomson Derwent
```

18/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011651139 **Image available**
WPI Acc No: 1998-068047/199807
XRPX Acc No: N98-053855

Vehicle mounted in OCR system with automatic voucher receiving/delivering facility using mobile communication system in goods transportation industry - has transmitting unit to transmit code information and compressed image information to computer which then registers it

Patent Assignee: NEC CORP (NIDE)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 9305676	A	19971128	JP 96148667	A	19960520	199807	B

Priority Applications (No Type Date): JP 96148667 A 19960520
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9305676	A		7	G06F-017/60	

Abstract (Basic): JP 9305676 A

The system includes an input unit (11) to input image information which is then cut by a cutting unit (21) into a **barcode** , OCR font, **handwritten** character and optical mark reader dot image. A first recognition unit (22) recognises the first code information of the **barcode** . A second recognition unit (23) recognises the second code information of OCR font, **handwritten** character and reader dot image.

An image compressor (24) compresses the image information. A memory (31) stores the compressed image information and the recognised code information. A transmitting unit (41) transmits the contents of the memory to a computer installed in the office through a mobile communication system. The received information is then registered in the computer.

ADVANTAGE - Eliminates need for performing **barcode** scanning. Corrects code information referring to voucher image.

Dwg.1/4

Title Terms: VEHICLE; MOUNT; OCR; SYSTEM; AUTOMATIC; VOUCHER; RECEIVE; DELIVER; FACILITY; MOBILE; COMMUNICATE; SYSTEM; GOODS; TRANSPORT; INDUSTRIAL; TRANSMIT; UNIT; TRANSMIT; CODE; INFORMATION; COMPRESS; IMAGE; INFORMATION; COMPUTER; REGISTER
Derwent Class: T01; T04; W01; W02
International Patent Class (Main): **G06F-017/60**
International Patent Class (Additional): G06K-009/00; H04Q-007/38
File Segment: EPI

18/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010883840 **Image available**
WPI Acc No: 1996-380791/199638
XRPX Acc No: N96-321006
Hand - written **information processor for printing address on parcel delivery voucher - has image arrangement part which arranges pattern data cut off from image stored in image memory at specified position**
Patent Assignee: TOPPAN MOORE KK (TOPP)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8185451	A	19960716	JP 94328592	A	19941228	199638	B

Priority Applications (No Type Date): JP 94328592 A 19941228
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8185451	A		4	G06F-019/00	

Abstract (Basic): JP 8185451 A

The appts consists of a **hand writing** input pad (10) on which the name and address are written by hand. An image memory (12) stores the contents of the **handwriting** input pad in the form of an image. An image cut-off part (16) cuts out the pattern data of required part from the image stored in the memory. An image arrangement part (18) arranges cut-off pattern data in specified position. The output of the image arrangement part is input to a printer (20) which outputs the voucher in which **handwritten** contents are printed. An information comparison part (24) performs information compression of output of the image cut-off part.

A 2D **bar coding** part (26) converts the output of the compression part into a 2D **bar code** . The **bar code** is printed on a paper card (28). A **bar code** reading part (32) reads the 2D **bar code** from the card. An expansion part (34) performs expansion of the 2D **bar code** and outputs it to the image arrangement part. Then, printing is performed by the printer.

ADVANTAGE - Prevents writing same contents by hand on multiple vouchers. Saves time. Improves efficiency.

Dwg.1/2
Title Terms: HAND; WRITING; INFORMATION; PROCESSOR; PRINT; ADDRESS; PARCEL; DELIVER; VOUCHER; IMAGE; ARRANGE; PART; ARRANGE; PATTERN; DATA; CUT; IMAGE; STORAGE; IMAGE; MEMORY; SPECIFIED; POSITION
Derwent Class: T01; T04
International Patent Class (Main): **G06F-019/00**
International Patent Class (Additional): **G06F-017/22** ; G06K-009/20
File Segment: EPI

18/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009417566 **Image available**
WPI Acc No: 1993-111080/199314
XRPX Acc No: N93-084596
Training system for neural networks used in automated recognition of handwritten script - uses extraction of tangent vector data from symbols during learning phase for faster classification during operation
Patent Assignee: AMERICAN TELEPHONE & TELEGRAPH CO (AMTT); AT & T CORP (AMTT)
Inventor: DENKER J S; LECUN Y A; SIMARD P Y; LE CUN Y A
Number of Countries: 005 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 535786	A2	19930407	EP 92306749	A	19920723	199314	B
CA 2069811	A	19930404	CA 2069811	A	19920528	199325	
EP 535786	A3	19940209	EP 92306749	A	19920723	199518	
CA 2069811	C	19980811	CA 2069811	A	19920528	199843	
EP 535786	B1	19990210	EP 92306749	A	19920723	199911	
DE 69228412	E	19990325	DE 628412	A	19920723	199918	
			EP 92306749	A	19920723		

Priority Applications (No Type Date): US 91770267 A 19911003
Cited Patents: No-SR.Pub; 2.Jnl.Ref; DE 4217832
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 535786	A2	E	23	G06K-009/66	
Designated States (Regional): DE FR GB NL					
EP 535786	B1	E		G06K-009/66	
Designated States (Regional): DE FR GB NL					
DE 69228412	E			G06K-009/66	Based on patent EP 535786
CA 2069811	A			G06F-015/18	
EP 535786	A3			G06K-009/66	
CA 2069811	C			G06F-015/18	

Abstract (Basic): EP 535786 A
The neural network is trained to recognise alphanumeric symbols and comprises a symbol input device, a neural net with trainable adjustable parameters, and an output classifier.
The net parameters are trained to classify each member of a set of known alphanumeric inputs. The parameters are then trained to classify spatially modified members of the set. The set members are transformed and used to generate tangent **vector** information, and the parameters adjusted to include tangent **vector** information in the output classification. The output of the classifier is designated as machine readable **bar code** and applied to the envelope.
USE/ADVANTAGE - For sorting mail. Faster training and recognition of **handwritten** script by use of symbol invariants.
Dwg.10/12
Title Terms: TRAINING; SYSTEM; NEURAL; NETWORK; AUTOMATIC; RECOGNISE; **HANDWRITING** ; SCRIPT; EXTRACT; TANGENT; **VECTOR** ; DATA; SYMBOL; LEARNING; PHASE; FAST; CLASSIFY; OPERATE
Index Terms/Additional Words: **MAIL** ; **SORTING**
Derwent Class: T01; T04; T05
International Patent Class (Main): **G06F-015/18** ; G06K-009/66
International Patent Class (Additional): **G06F-015/80**
File Segment: EPI

18/5/12 (Item 12 from file: 347)
DIALOG(R)File 347:JAPIO

07097411 **Image available**
HANDWRITTEN INFORMATION PROCESSING, **HANDWRITTEN** INFORMATION PROCESSING SYSTEM AND INFORMATION RECORDING MEDIUM

PUB. NO.: 2001-325067 [JP 2001325067 A]
PUBLISHED: November 22, 2001 (20011122)
INVENTOR(s): HATTORI HITOSHI
FURUTA TOSHIYUKI
BEPPU TOMOHIKO
APPLICANT(s): RICOH CO LTD
APPL. NO.: 2000-145696 [JP 2000145696]
FILED: May 17, 2000 (20000517)
INTL CLASS: **G06F-003/03**

ABSTRACT

PROBLEM TO BE SOLVED: To provide a **handwritten** information processor and a **handwritten** information processing system and an information recording medium, capable of ensuring security of document information and satisfactory handleability.
SOLUTION: This **handwritten** information processor for generating data corresponding to characters written by hand on an information recording medium is provided with a memory 4 for storing data, a **bar code** reader 33 for reading a first password written in the information recording medium, a discriminating circuit 3 for discriminating whether a first password read by the **bar code** reader 33 matches a previously set second password, and a control circuit 5 for allowing the memory 4 to store the data, when it is discriminated by the discriminating circuit 3 that the first password matches the second password.

18/5/15 (Item 15 from file: 347)
DIALOG(R)File 347:JAPIO

06111920 **Image available**
SLIP ISSUING SYSTEM

PUB. NO.: 11-053453 [JP 11053453 A]
PUBLISHED: February 26, 1999 (19990226)
INVENTOR(s): SHIGEKUSA HISASHI
OSHIMA TADAO
FUJIMOTO SUNAO
OKAMOTO HIROSHI
TANO ATSUSHI
KUROBE TAKAHIRO
APPLICANT(s): DENSO CORP
APPL. NO.: 09-210909 [JP 97210909]
FILED: August 05, 1997 (19970805)
INTL CLASS: **G06F-019/00** ; B41J-029/38; **G06F-017/60** ; G07D-009/00

ABSTRACT

PROBLEM TO BE SOLVED: To perform delivering operation efficiently by making a radio communication between the portable information terminal device that a person carries and the vehicle-side information management device mounted on a vehicle and printing necessary information on a slip at the portable information terminal side.

SOLUTION: Only the telephone numbers of a sender and a recipient are inputted to the portable information terminal device and sent to the vehicle-side information management device. The vehicle-side information management device retrieves customer information such as addresses and names corresponding to the telephone number by referring to a customer information database. When no customer information is found, that is transmitted to the portable information terminal device. In this case, the portable information terminal device allows **handwriting** input to a slip display part 12b using an input pen 16 and reads **handwritten** characters through specific converting operation to input the characters. Then a two-dimensional **bar code** representing the inputted data in two dimensions is generated and then a printer part 13 prints the same display contents as the slip display part 12b and outputs them on a slip.

18/5/21 (Item 21 from file: 347)
DIALOG(R)File 347:JAPIO

00496348
INVOICE TERMINAL PROCESSOR

PUB. NO.: 54-148348 [JP 54148348 A]
PUBLISHED: November 20, 1979 (19791120)
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APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 53-056916 [JP 7856916]
FILED: May 12, 1978 (19780512)
INTL CLASS: [2] **G06F-015/24**
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)
JAPIO KEYWORD:R107 (INFORMATION PROCESSING -- OCR & OMR Optical Readers)
JOURNAL: Section: E, Section No. 166, Vol. 04, No. 8, Pg. 72, January 22, 1980 (19800122)

ABSTRACT

PURPOSE: To read out through the optical device the invoice No., the **hand - written** names of the consignor and consignee and others for memorization and then printing, and thus to omit the key-in and reading procedures for them directly or changing into katakana (Japanese syllabary).

CONSTITUTION: Invoice 1 is inserter to inserter 2, and the necessary information is inserted through keymat (e). When the insertion of the information is over, drum 8 is turned by motor 27 to roll invoice 1 in and then to set the center lines of the names of the consignor and the consignee and others written by hand on the invoice right above image sensor block 13. Then the image sensor is scanned, and thus the **hand - written** information is read out and processed through computer (a) to be memorized in memory unit (b). With turning of drum 8, the **bar code** of the invoice No. is set right above block 13 to carry out the same process. Invoice 1 then stops at printer block 24 through rotations of drum 8 to print the information sent from computer (a). With end of the printing, invoice 1 is sent outside via roller 30 and guide 31.